REPORT

DATE: November 1, 2007

TO: Transportation & Communications Committee

FROM: RCP Task Force
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SUBJECT: Draft Regional Comprehensive Plan (RCP) Chapters

EXECUTIVE DIRECTOR'S APPROVAL:

RECOMMENDED ACTION:
Approve for release the Preliminary Draft Regional Comprehensive Plan's (RCP) Transportation and Security & Emergency Preparedness chapters.

BACKGROUND:
The RCP is an advisory policy document that responds to Regional Council direction to look at long range challenges for the region and a vision for meeting those challenges. It lays out a path forward for consideration by SCAG, local governments, and other stakeholders in the region.

The RCP serves as an important complement to the Regional Transportation Plan (RTP), which is scheduled for release in November 2007 and must be adopted by April 2008 to avoid a potential federal air quality conformity lapse. Although the RTP will meet all requirements for transportation planning in the region, it is constrained by available resources and regulatory requirements and will not, on its own, respond to the full range of environmental and socio-economic challenges in the region. The RCP complements the RTP by recommending how the region can better accommodate growth, protect the environment, and assure economic competitiveness.

The RCP Task Force is presenting and recommending consideration of two chapters of the Preliminary Draft RCP that have been under the purview of the TCC: Transportation and Security & Emergency Preparedness. These chapters are based on recommended Goals, Outcomes, and Action Plans that were presented to TCC on August 30, 2007. The content of these chapters is the result of extensive input and review from the RCP Task Force and other stakeholders.

FISCAL IMPACT:
Work performed for the Regional Comprehensive Plan is included in the current year SCAG Overall Work Program (08-035.SCGS1).

Reviewed by:

Division Manager

Reviewed by:

Department Director

Reviewed by:

Chief Financial Officer

PRELIMINARY DRAFT

Transportation

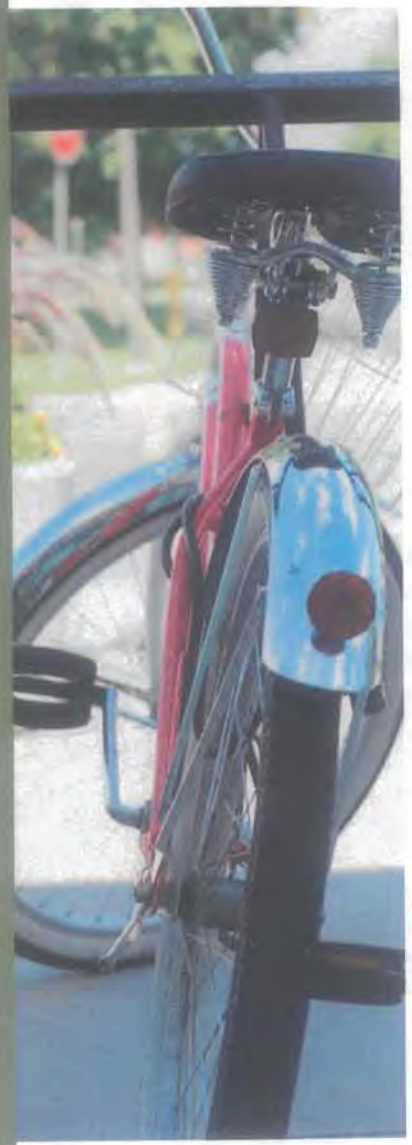
THE CHALLENGE

The continuing urbanization of our Southern California region makes it more difficult to make dramatic improvements to our transportation system. Rebuilding and expanding an existing transportation facility in a built out urban environment is expensive and often unpopular. When transit projects, new roads, or other travel options are unveiled, we see temporary improvements. However, those usually disappear within months, replaced by a return to traffic and congestion, which generally seem to get worse as the years go by. In 2006, the State of the Region report card gave a failing grade of "F" to Southern California, noting that we continue to rank as the most congested metropolitan region in the nation. While recent higher gas prices have helped reduce congestion growth, the region still shows a continuing trend towards reduced carpooling and transit ridership.

Our transportation challenge is shared by other metropolitan regions throughout the world. Traffic congestion is largely a symptom of the growth patterns and population density of our region. The decentralization of our region's growth, combined with the sheer density of people, jobs, and cars makes it nearly impossible for our transportation system to keep pace. Indeed, a successful transportation plan in any growing region of the country is one that holds the line on traffic congestion. Most plans simply make future traffic "less worse" than if nothing were done altogether. Even if we had the limitless capacity (and funds) to expand our roads to relieve congestion, the short- and long-term impacts to growth, traffic congestion and the environment would be unacceptable.

Indeed, the transportation system heavily influences environmental, economic, and quality of life issues both positively and negatively. An efficient transportation system minimizes impacts to our air quality, surface and underground water supplies, and helps accommodate growth that reduces the economic costs of living our lives. An inefficient system affects nearly every area of the environment directly and has an indirect set of impacts by inducing growth in areas where our public infrastructure often can't handle it.

The Regional Transportation Plan process is legally required to be financially constrained. While the lack of adequate funding and public support constrain our ability to do more, the RCP acknowledges that more must be done beyond the conventional transportation planning process to reduce congestion, vehicle miles traveled, and increase the mobility of people and goods around the region with minimal interference. The RCP



is founded on the premise that we need to make profound changes in the way we travel today and radically alter the way we plan our transportation system tomorrow.

Our challenges to developing transportation policies that can achieve ambitious mobility goals can be broadly divided into three categories:

- addressing demand on our transportation system from growth in population, employment and households,
- preserving, wisely utilizing, and, when necessary, expanding our infrastructure, and
- funding.

DEMAND ON OUR TRANSPORTATION SYSTEM

Each major mode in our transportation system faces challenges meeting the growth that is coming our way. If current population and employment trends continue as projected, regional traffic delay is expected to more than double to 3.6 million hours of daily delay by 2030. Travel speeds on highways will become more unpredictable and average speeds will decrease substantially. In addition to conventional passenger surface transportation, there are two other major dynamics that will continue to grow over the next 25 years and pose major challenges for the region.

Crisis in Transporting Goods. The Southern California region is facing dramatic growth in rail and truck traffic. Almost all of the short-haul and significant share of medium- and long-haul movement of goods occur by truck. Severe congestion due to truck traffic is expected to worsen in the region's major transportation corridors like the I-710 and SR-60 freeways, as the regional system will see up to 216 percent more truck trips by 2035. Containerized trade volume is expected to triple to 42.5 million Twenty-Foot Equivalent Units (TEUs) by 2030. These forecasts are capacity-constrained significantly below anticipated demand, and are based on an increase of port terminal productivity from 4,700 TEUs per acre per year currently to over 10,000 TEUs per acre per year in the future. The ability of the ports to handle this unprecedented growth in containerized cargo volumes is critical to the continued health of the local, regional, and the national economy. The challenge in address the growth in containerized cargo at the ports is compounded by traffic bottlenecks for trucks entering and leaving the port areas. Additionally, the region's intermodal rail yards are reaching capacity and causing delays in moving both international and domestic containers between rail and trucks. Our ability to accommodate the subsequent rail and truck distribution traffic will substantially drive whether we can achieve ambitious transportation goals.

Air Travel. The level of air passenger demand is forecast to double before 2035 from the current regional level of 88 million annual passengers (MAP). For every one million regional air passengers, it is estimated that there is a positive regional

economic impact of $620 million (in 1998 dollars) and 4,475 jobs. In addition, the number of jobs created by air cargo and freight movement in the region is enormous and vital to the overall health of the regional economy. However, the increased traffic that will cross our region's roads and freeways to get to our eight commercial service airports must be addressed if we are to reduce congestion beyond current levels.

Preserving and Expanding Our Infrastructure

Every past and future investment in our transportation system creates a new, long-term commitment to operating and maintaining that infrastructure.

The region must get the most out of the current system. This is especially true for the State Highway System. Small physical improvements (e.g., auxiliary lanes that extend the merging range) and technology deployments (e.g., advanced ramp metering) offer us affordable solutions to restore some of the lost productivity due to increasing congestion. These technology deployments are often referred to as Intelligent Transportation Systems or ITS. The combination of investments reduces delays and the duration of congestion, and improves the predictability of travel time.

As for system preservation, current estimates show that our region needs $40 billion in order to maintain our current system. However, we have a funding shortfall of over $26 billion, meaning that most of our transportation infrastructure is aging and will require more investment in maintenance and preservation.

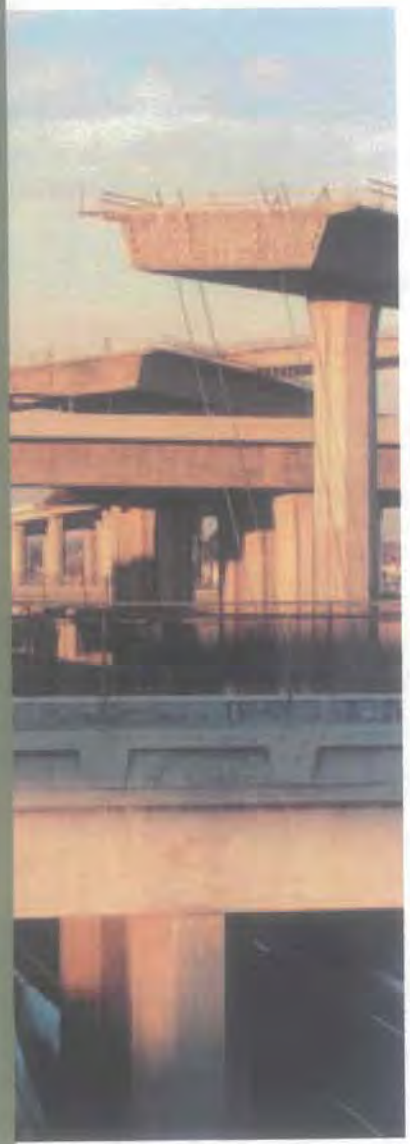
In light of this inability to even maintain our existing system, the region must find ways to expand travel options for passenger and freight movement. Conventional multi-modal investments must be complemented with land use strategies, market-based initiatives, and other major, innovative programs if we are to reverse the historical trends toward increasing congestion and vehicle miles traveled.

Financial Needs

The SCAG region faces significant financial challenges to meet current transportation maintenance and operational needs for the RTP horizon, not to mention what is needed to further improve mobility and air quality in the region. Historical sources of funding such as gas taxes may be a decreasing source of revenue in light of potential shifts to other fuel sources. Public-private partnerships, user fees, and other sources of revenue must be explored if we are to find new ways to address current and future congestion.

THE PLAN

While the RCP calls for unprecedented goals and action, it recognizes that the pending 2008 Regional Transportation Plan (RTP) will make up the constrained, or funded, foundation of any more ambitious long-term plan. The pending RTP relies



on a number of strategies to achieve more modest, constrained goals. These include an increased focus on operational, management and preservation strategies; land-use integration with transportation investments; and strategic system expansion investments.

Preservation – Protecting our Infrastructure

The Draft 2008 RTP proposes setting aside substantial funding for infrastructure preservation. However, there will remain substantial shortfalls needed to fund the $40 billion in needs.

Operational Strategies – Getting the Most Out of Our Existing System

The RTP proposes funding for operational strategies that improve the productivity of the State Highway System through 2035. The total amount of funding represents less than one percent of the overall RTP expenditures, but is expected to produce benefits that are almost an order of magnitude higher.

Transportation Demand Management (TDM)

The RTP includes $1.25 billion in TDM investments through 2030, with over $900 million dedicated to non-motorized transportation improvements.

Strategic System Expansion / Capital Investments

SCAGs transportation planning proposes a balanced investment in all of the Region's modes so that the system performs at the highest level possible.

For example, the RTP includes a Strategic Arterial Improvement concept that could involve a combination of widening, signal prioritization and other Intelligent Transportation Systems (ITS) deployment and grade separation at critically high-volume intersections to enhance the flow speed and capacity of the arterial. In addition to the specific arterial improvements identified under the Smart Street Improvement Program, this Plan proposes a significant increase in funding for arterial improvements and capacity enhancements.

Strategic Growth Linked to Transportation

The RTP will continue to promote land use policies that have proved to be both regionally beneficial relative to their transportation performance, and in tune with the emerging public policy, development patterns and community needs throughout the region. Policies will include:

- Identify regional strategic areas for infill and investment
- Structure the plan on a 3-tiered system of centers development.

- Develop "complete communities" through a concentration of activities with housing, employment, and a mix of retail and services, located in close proximity to each other.
- Develop nodes on a corridor.
- Plan for additional housing and jobs near transit.
- Plan for a changing demand in types of housing.
- Continue to protect stable existing single family areas.
- Ensure adequate access to open space and preservation of habitat.
- Integrate land use to decentralized regional aviation strategy and job creation.
- Incorporate local input and feedback on future growth.

Goods Movement Strategies

In order to handle the unprecedented growth in cargo volumes in the future, the San Pedro Bay ports have implemented or are embarking on the planning and development of specific strategies to increase capacity and enhance operational efficiency in the handling of cargo, while at the same time minimizing the impacts of port goods movement activity on the environment and public health. Some of these strategies that will play a key role in allowing the ports to realize their full potential in supporting the growth in cargo include the following:

- On-dock Rail Capacity Enhancements,
- PierPass Off-peak Program,
- Virtual Container Yards, and
- Port Clean Air Action Plan Strategies

Looking beyond the ports to the freight distribution network, the RTP will include strategies to facilitate truck movement including:

- Truck Climbing Lanes,
- Dedicated Truck Lanes, and
- Truck Emission Control Strategies

SCAG's RTP also proposes rail system capacity enhancements that replace truck traffic, including, rail grade separations, and exploring alternative methodologies to reduce rail emissions. These strategies include:

- Near Dock Intermodal Yard Capacity Enhancements,
- Rail Mainline Capacity Improvements,
- Rail Grade Separations,
- Rail Electrification, and

- Locomotive Engine Upgrades

Finally, Inland Ports and related initiatives have been proposed as solutions to freight mobility issues that cannot be addressed by straightforward capacity increases. The broad potential benefits of an inland port include facilitating goods movement, encouraging economic development, reducing traffic congestion, and promoting the regional objectives.

High Speed Rail Transport System

The HSRT system comprises a long-term vision connecting the region's ports, airports, and urban activity centers. The system can be constructed in multiple stages that can each be financially viable. The financial performance will be enhanced as the system is extended in connectivity throughout the region and the volume of users increases.

Aviation

SCAG's Regional Aviation Strategy would accommodate a total regional passenger aviation demand of 170 million annual passengers (MAP). Under the Strategy, rather than relying on expanding existing urban airports, the future demand for air travel will be largely served by using available capacity at airfields located in the Inland Empire and north Los Angeles County where projected population growth will be best served. This plan calls for constraining the LAX to its estimated existing physical capacity of 78 MAP, increasing the Ontario International Airport to 30 MAP, and a new passenger airport at Palmdale that will accommodate 12.8 MAP.

Cooperation between airport authorities is necessary to ensure efficient usage of capacity. Cooperation between airports would be accomplished through the integration of airport master plans, and the development of memoranda of understanding and contractual agreements between airports. These agreements would also identify complementary roles and market niches between airports to increase synergy in the system and maximize utilization of available airport capacities throughout the region. For example, Los Angeles World Airports would play a key role in integrating master plans for the three airports it operates, namely LAX, Ontario and Palmdale.

Airport Ground Access

The Regional Aviation Strategy will have localized ground access impacts at a number of airports. Particularly, the Regional Aviation Strategy will result in dramatic increases in airport activities (people as well as cargo) at Ontario, Palmdale and a number of other airports. A number of freeway and arterial improvements and transit strategies are proposed in SCAG's RTP to address the ground access issues as part of the overall transportation investment in the Region.

BEYOND THE RTP

It is recognized that beyond the constraints of the RTP, more should be done to reduce VMT, congestion and improve air quality. Whatever strategies are considered, it is likely they would require extensive collaboration and cooperation with local, state and federal governments. One example may be market based incentives, such as (but not limited to) High Occupancy Toll Lanes or congestion pricing.

Increased use of such market based incentives and dis-incentives should be studied for effectiveness on achieving transportation and air quality goals, as well as potential economic and social impacts.

The Draft RCP's strategic initiatives reflect broad categories of ideas that will be refined through completion of the pending 2008 RTP. Specifically, development of the RTP's Strategic Plan will help refine this Plan's strategic initiatives.

TRANSPORTATION GOALS

- A more efficient transportation system that reduces and better manages vehicle activity.
- A cleaner transportation system that minimizes air quality impacts and is energy efficient.

TRANSPORTATION OUTCOMES

- Reduce the region's vehicle miles traveled from all vehicles and from carbon-based fueled vehicles to 1990 levels by 2020.
- Reduce the region's use of gasoline and diesel fuel from on-road vehicles to 1990 levels by 2020, including accelerating the penetration of vehicles fueled by fuel cells or other non-petroleum based engine technologies.

TRANSPORTATION ACTION PLAN

IGR/Best Practices	Legislation	Coordination	Constrained Policies	Potential for Direct/Indirect Benefits									Other Benefits	
				Land Use	Transportation	Air Quality	Water	Energy	Open Space	Economy	Security	Solid Waste	Public Health	Climate Change
SCAG Policies (SCAG policies shall be subject to consideration for future Overall Work Plans)														
			TR-1 SCAG shall ensure that transportation investments are based on SCAG's adopted Regional Performance Indicators.	X	X	X		X		X	X		X	X
			TR-2 SCAG shall ensure safety, adequate maintenance, and efficiency of operations on the existing multi-modal transportation system will be RTP priorities and will be balanced against the need for system expansion investments.	X	X	X		X		X			X	X
		X	TR-3 SCAG shall develop a collaborative implementation program that identifies required actions and policies for RTP land use and growth strategies that differ from expected trends.	X	X	X		X	X	X		X	X	X
			TR-4 SCAG shall support and encourage High Occupancy Vehicle gap closures that significantly increase transit and rideshare usage.		X	X		X					X	X
			TR-5 SCAG shall monitor progress of the RTP, including timely implementation of projects, programs, and strategies.		X								X	
		X	TR-6 SCAG shall address SAFETEA-LU requirements that call for improved safety planning and consultation with environmental and natural resource stakeholders when considering transportation funding plans, programs, and projects.	X	X	X	X	X	X	X	X	X	X	X

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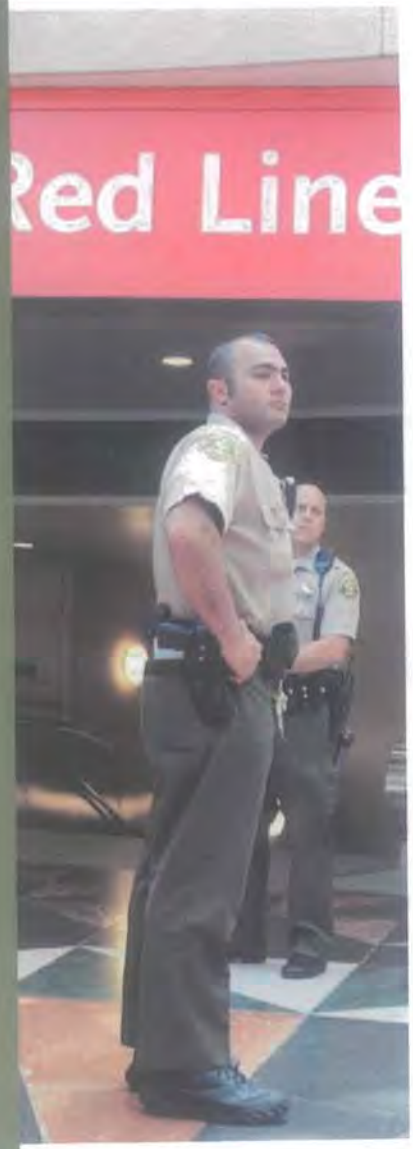
Security and Emergency Preparedness

THE CHALLENGE

Southern California is home to significant threats; including earthquakes, tsunamis, wildfires, flooding and mudslides. More recently, terrorism has been added to the threats that the region must prepare against. The complexity of the SCAG region, with a range of potential terrorism targets, presents significant challenges in coordinating and implementing effective homeland security programs. The unexpected and complex nature of these natural and human-caused incidents require extensive coordination, collaboration and flexibility among all of the agencies and organizations involved in planning, mitigation, response and recovery. It should be noted that **safety** is defined as the protection of persons and property from unintentional damage or destruction caused by accidental or natural events. **Security** is defined as the protection of persons or property from intentional damage or destruction caused by vandalism, criminal activity or terrorist attacks. The Transportation Research Board has classified emergency events that affect transportation agencies into several categories, which is illustrated below in **Table 9.1**.

The interdependency of the jurisdictions and organizations makes regional cooperation and coordination essential to security and emergency preparedness. No significant event is truly local, as political boundaries are permeable and critical local infrastructure may serve the entire region. No jurisdiction stands alone. A high-risk, well-resourced municipality may be as dependent on a smaller jurisdiction for support in an emergency as a smaller jurisdiction may be on a larger one. Typically, no single agency is responsible for transportation security. At the local level, especially within transit agencies, safety may be handled within one office. However, it is far less likely that the security of a surface transportation mode is managed by one entity and that this entity is even controlled by the transportation organization. For example, highways and transit networks traverse multiple police jurisdictions, local fire departments generally fill the incident command role after terrorist events, regional command and control centers respond to both natural and intentional disasters, and federal agencies intervene as needed and based on specific guidelines such as the crossing of state boundaries.

A proactive region that improves its homeland security programs and prepares for emergencies is better insulated against the economic, public health, transportation, and other impacts from natural and human-caused accidents. When a disaster occurs, there is a cascading effect on the transportation, utilities, communications, fuel, and water infrastructure services



and delivery systems that we depend on. When one of these critical elements in our support system breaks down, it has a domino effect on other elements. When multiple elements break down, the effect can be crippling. Some of the ways in which the infrastructure can be affected in a disaster or emergency and effects on emergency service providers are shown in **Tables 9.2** and **9.3**.

A continuing, cooperative and collective regional effort will be needed to assist the region in the planning, preparation and response to emergencies, whether caused by natural or human elements. To assist in this effort, this chapter identifies SCAG's potential role and responsibility in regards to the relationship between transportation and emergency preparedness. It describes the current programs at the federal, State and local levels; identifies security issues in the transportation infrastructure; and recommends policies for SCAG and other stakeholders.

The continued emphasis on enhancing transportation security is also reflected in the most recent transportation authorization bill, known as SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users). SAFETEA-LU specifies that Metropolitan Planning Organizations (MPO) such as SCAG develop a metropolitan planning process that provides consideration for projects and

TABLE 9.1 EMERGENCY EVENTS IMPACTING TRANSPORTATION AGENCIES[1]

Naturally Occurring	Human Caused	
	Intentional	Non-Intentional
Droughts Dust/Wind Storms Earthquakes Electrical Storms Floods High Winds Hurricanes Ice Storms Landslides Naturally Occurring Epidemics Snowstorms and Blizzards Tornadoes Tropical Storms Tsunamis Wildfires	Bomb Threats and Other Threats of Violence Disruption of Supply Sources Fire/Arson Fraud/Embezzlement Labor Disputes/Strikes Misuse of Resources Riot/Civil Disorder Sabotage: External and Internal Actors Security Breaches Terrorist Assaults Using Chemical, Biological, Radiological, or Nuclear Agents Terrorist Assaults Using Explosives, Firearms, or Conventional Weapons Theft Vandalism War Workplace Violence Cyber Attacks	Accidental Contamination or Hazardous Materials Spills Accidental Damage to or Destruction of Physical Plant and Assets Accidents That Affect the Transportation System Gas Outages Human Errors HVAC System Failures or Malfunctions Inappropriate Training on Emergency Procedures Power Outages Software/Hardware Failures or Malfunctions Unavailability of Key Personnel Uninterruptible Power Supply (UPS) Failure or Malfunction Voice and Data Telecommunications Failures or Malfunctions Water Outages

strategies that will "increase the security of the transportation system for motorized and non-motorized users."

THE PLAN

This chapter of the RCP aims to achieve and sustain risk-based target levels of capability to prevent, protect against, respond to, and recover from major human- caused or natural events in order to minimize the threat and impact to lives, property and the regional economy. This centers around coordinating the numerous plans, programs, organizations and infrastructure in place within the SCAG region to provide safety and security of the regional transportation system for many potential situations.

SCAG's role in homeland security is based on the potential role of a MPO in relationship to six phases of an incident/disaster:[2]

- Prevention: Stopping an attack before it occurs; improved facility design; surveillance, monitoring
- Response/Mitigation: Reducing impacts of an attack; evacuation; identifying best routes; effective communication system
- Monitoring: Monitoring and evaluating incidents; surveillance, monitoring, sensing, public information
- Recovery: Facilitating and reconstruction, restoring operation of transportation system
- Investigation: Determination of causes, and responsible parties; security/police activity
- Institutional Learning: Self-assessment of actions; feedback to prevention element

TABLE 9.2 POSSIBLE EFFECTS OF DAMAGE TO INFRASTRUCTURE[3]

Service	Effect
Transportation	Inability to get emergency service personnel into the affected area. Inability to transport victims away from the area.
Electrical	Increased risk of fire and electrical shock. Possible disruption to transportation system if downed lines are across roads.
Telephone	Lost contact between victims, service providers, and family members. System overload due to calls from or to friends or relatives.
Water	Disruption of service to homes, businesses, and medical providers. Inadequate water supply for firefighting. Increased risk to public health if there is extensive damage to the water supply or if it becomes contaminated.
Fuel Supplies	Increased risk of fire or explosion from ruptured fuel lines. Risk of asphyxiation from natural gas leaks in confined areas.

Because of its traditional role as the MPO for the six-county Southern California region, SCAG is best suited to provide a forum where plans and data can be developed and coordinated with other regional planning efforts; and work towards developing regional consensus, but not be responsible for operation and implementation of plans and programs. SCAG should play a lead role in some areas, a minor role in others, or play no role at all. For example, SCAG has almost no role in the investigation aspect of security, only a minor role; as champion, in the recovery phase; but should play a lead role in championing and convening prevention and developing the institutional learning. SCAG could play a significant role in helping the region coordinate planning in preparation and anticipation of potential future incidents; and coordinate public information dissemination strategies.

This enhanced leadership and data provision role is designed to support federal, state and local security and emergency responders. The RCP proposes that SCAG coordinate more with these front-line responders to ensure that planning and information are available to help the region deal with inevitable emergencies.

The recommended policies of this plan are also designed to urge transportation planning agencies to devote adequate funding to the operations and maintenance of our aging transportation system. Failing infrastructure is often the result of insufficient roadway, bridge, and transit system maintenance due to lack

TABLE 9.3 POSSIBLE EFFECTS OF DAMAGE ON EMERGENCY SERVICE PROVIDERS[3]

Type of Damage	Effect
Roadways, Bridges, Tunnels, Interchanges	Inability to assess damage accurately. Ambulances prevented from reaching victims and/or victims prevented from reaching emergency medical services. Police prevented from reaching areas of civil unrest. Fire departments prevented from getting to fires. Flow of needed supplies is interrupted. Inability to deploy assets as part of incident response and to manage transportation flows Inability for emergency service providers to manage an evacuation
Structural	Damaged hospitals unable to receive patients. Increased risk of damage from falling debris.
Disrupted Communication	Victims unable to call for help. Coordination of services is hampered. Inability for incident command structure to receive real time situational information, reducing its effectiveness
Fuel Line Damage	Fire and paramedic services overburdened. Inability to sustain emergency response and recovery
Disrupted Water Service	Firefighting capabilities restricted. Medical facilities hampered.

of funding or other resources. While not as glamorous as earmarking funding for roadway and transit system expansions, our region must improve its commitment to ensuring that the existing transportation system is safe and secure from natural and man-made incidents. To that end, the RCP recommends that SCAG work with partner agencies, federal, state and local jurisdictions to find opportunities to leverage and effectively utilize transportation and public safety/security resources in support of this effort.

Table 9.4 highlights SCAG's role in responding to specific threats to the region.

Earthquakes. The most likely threat to the region is one we have faced many times in varying severity, the earthquake. The 1971 Sylmar earthquake and the 1994 Northridge trembler caused significant transportation damages to the region. An even greater earthquake in the SCAG region is not just a statistical possibility, but a certainty.

TABLE 9.4 SCAG ROLE IN SECURITY AND EMERGENCY PREPAREDNESS

Incident Phase	Traditional	Convener	Champion	Developer	Operator
Prevention	•	☑	☑	•	☒
Response/Mitigation	•	☑	☑	•	•
Monitoring/Information	•	☑	☑	•	☒
Recovery	•	☑	•	☒	☒
Investigation	•	☒	☒	☒	☒
Institutional Learning	☑	☑	☑	☑	☑

No Role ☒ Minor Role • Lead Role ☑

Roles:	
Traditional	Help manage the system management and operations role in the ongoing transportation planning activities. The primary responsibility for projects rests elsewhere.
Convener	The MPO acts as a forum where operations plans can be discussed and coordinated with other plans in the region, still not responsible for operation and implementation.
Champion	The MPO works aggressively to develop regional consensus on operations planning. MPO planners develop programs and projects and the MPO takes the lead in developing regional agreements on coordinated operations.
Developer	MPO develops regional operation plans and incorporates operations strategies into the transportation plan. System-oriented performance measures would be used to identify strategic operations gaps in the transportation system.
Operator	The MPO would be responsible for implementing operations strategies that were developed as part of the MPO-led planning process.

SCAG's role in an earthquake would be based on the severity of the earthquake. For smaller earthquakes, SCAG would work with local agencies to program transportation infrastructure repairs.

For moderate earthquakes, SCAG would work with the State and federal government to "fast track" the programming of transportation infrastructure repairs.

For significant earthquakes, SCAG would provide GeoData to responders to help identify transit dependent areas for rescue and evacuation, and critical transportation infrastructure that would need to be repaired to most efficiently help in the relief and recovery efforts. SCAG should maintain mutual aid agreements with other metropolitan areas in the event the organization is disabled by the event, maintaining the flow of data to responders.

There is a danger that an earthquake or series of earthquakes may cause water retention facilities to fail. Dam owners are required by California Regulations to provide a technical study and an inundation map, showing the area downstream of a dam that would be inundated or otherwise affected by the failure of the dam and accompanying large flood flows.

Based upon a review of inundation maps or based upon information gained by an on-site inspection and consultation with the affected local jurisdiction (when the requirement for an inundation map is waived), the Office of Emergency Services shall determine and designate areas where death or personal injury would, likely result from the partial or total failure of a dam. The appropriate public safety agencies of any city, county, or city and county, the territory of which includes any of those areas, may adopt emergency procedures for the evacuation and control of populated areas below those dams.[4]

Tsunamis. Tsunamis, while less frequent than earthquakes, have happened in the past, and will likely happen in the future. An August 31, 1930 tsunami resulted in a three meter run-up (maximum vertical elevation wave reached above sea level at the time of tsunami) wave observed in Santa Monica bay. One man drowned and several swimmers required rescuing.

Even small tsunamis can be dangerous, producing dangerous undertows that can drown swimmers, rip ships from their moorings and damage low lying structures.

While development along the coast would be affected, based on the size of the waves, the greatest threatened areas would be the ports of Long Beach (POLB) and Los Angeles (POLA), which have a dock height of only a few feet above the high tide line.

The major sources of tsunami energy reaching the POLA and the POLB are from the northern regions offshore of Alaska and from southern regions near Chile. Tsunamis from great earthquakes in the Far East do not appear to impact the Ports as much as those from generation regions in the north and the south.[5]

In the event of a tsunami, SCAG would work with the State and Federal government to "fast track" the programming of transportation infrastructure repairs.

Flooding. Much of the SCAG region is composed of alluvial fans, gently sloping landforms created over time from the erosion of the surrounding mountains. Flooding, even though characterized by shallow depth, can be quite destructive, traveling at relatively high speed and carrying sediment and debris.

In 1938, after a tremendous flood that killed 113 people, the Army Corps of Engineers began channelizing the major rivers in Los Angeles County, developing six catch basins and 14 smaller mountain dams in an effort to reduce flooding. While flooding has not been eliminated, the impacts in urban areas of Los Angeles County have been reduced.

Since then, the regional population has grown significantly into the Inland Empire and North Los Angeles County. Many of the alluvial floodplains in these areas have been developed, primarily with residential housing. Droughts and wildfires increase the risk of flash floods and mudslides during rain storms.

The combination of damaged hillsides, alluvial fans and inclement weather allow some degree of accuracy in predicting danger areas for flooding, allowing precautionary evacuations and road closures.

In the event that flooding damages transportation infrastructure, SCAG would work with the State and federal government to "fast track" the programming of transportation infrastructure repairs.

Security and Emergency Preparedness Goals

- Ensure transportation safety, security, and reliability for all people and goods in the region.
- Prevent, protect, respond to, and recover from major human-caused or natural events in order to minimize the threat and impact to lives, property, the transportation network and the regional economy.

Security and Emergency Preparedness Outcomes

- Increase per capita funding by 2012 for transportation system maintenance and preservation programs over 2007 levels.
- Increase per capita funding for Intelligent Transportation Systems projects that enhance or benefit regional transportation security.
- 100 percent of government agencies and organizations involved in planning, mitigation, response and recovery involved in improving emergency preparedness coordination, collaboration and flexibility.

SECURITY AND EMERGENCY PREPAREDNESS ACTION PLAN

IGR/Best Practices	Legislation	Coordination	Constrained Policies	Potential for Direct/Indirect Benefits: Land Use	Transportation	Air Quality	Water	Energy	Open Space	Economy	Security	Solid Waste	Other Benefits: Public Health	Climate Change
SCAG Policies (SCAG policies shall be subject to consideration for future Overall Work Plans)														
		X	SEP-1 SCAG shall help ensure the rapid repair of transportation infrastructure in the event of an emergency.		X					X	X		X	
		X	SEP-1.1 SCAG, in cooperation with local and state agencies, shall identify critical infrastructure needs necessary for: a) emergency responders to enter the region, b) evacuation of affected facilities, and c) restoration of utilities.		X		X	X		X	X		X	
		X	SEP-1.2 SCAG, in cooperation with CTCs, California and the federal Government, shall develop a transportation recovery plan for the emergency awarding of contracts to rapidly and efficiently repair damaged infrastructure.		X					X	X			
		X	SEP-2 SCAG shall continue to deploy and promote the use of intelligent transportation system (ITS) technologies that enhance transportation security and reduce air pollution.		X	X		X		X	X		X	
		X	SEP-2.1 SCAG shall work to expand the use of ITS to improve surveillance, monitoring and distress notification systems and to assist in the rapid evacuation of disaster areas.		X						X			
		X	SEP-2.2 SCAG shall incorporate security into the Regional ITS Architecture.		X						X			
X			SEP-3 SCAG shall establish transportation infrastructure practices that promote and enhance security.		X						X			
X			SEP-3.1 SCAG shall work with transportation operators to plan and coordinate transportation projects, as appropriate, with Department of Homeland Security grant projects, to enhance the regional transit security strategy (RTSS).		X						X		X	
X			SEP-3.2 SCAG shall encourage transportation infrastructure practices that identify and prioritize the design, retrofit, hardening, and stabilization of critical transportation infrastructure to prevent failure, to minimize loss of life and property, injuries, and avoid long term economic disruption.		X					X	X		X	
		X	SEP-3.3 SCAG shall establish a Transportation Security Working Group (TSWG) with goals of RTP consistency with RTSS, and to find ways SCAG programs can enhance RTSS.		X						X		X	
		X	SEP-4 SCAG shall establish a forum where policy makers can be educated and regional policy can be developed.								X			
		X	SEP-4.1 SCAG shall work with local officials to develop regional consensus on regional transportation safety, security, and safety-security policies.								X			

IGR/Best Practices	Legislation	Coordination	Constrained Policies	Potential for Direct/Indirect Benefits									Other Benefits	
				Land Use	Transportation	Air Quality	Water	Energy	Open Space	Economy	Security	Solid Waste	Public Health	Climate Change
		X	SEP-5 SCAG shall help to enhance the region's ability to deter and respond to acts of terrorism, human-made or natural disasters through regionally cooperative and collaborative strategies by:								X			
		X	SEP-5.1 Working with local officials to develop regional consensus on regional transportation safety, security, and safety-security policies.								X			
		X	SEP-6 SCAG shall help to enhance the region's ability to deter and respond to terrorist incidents, human-made or natural disasters by strengthening relationship and coordination with transportation.		X						X			
		X	SEP-6.1 SCAG shall encourage all SCAG elected officials are educated in the National Incident Management System (NIMS).								X			
		X	SEP-6.2 SCAG shall work with partner agencies, federal, state and local jurisdictions to improve communications and interoperability and to find opportunities to leverage and effectively utilize transportation and public safety/security resources in support of this effort.		X						X			
		X	SEP-7 SCAG shall work to enhance emergency preparedness awareness among public agencies and with the public at-large.								X			
		X	SEP-8 SCAG shall work to improve the effectiveness of regional plans by maximizing the sharing and coordination of resources that would allow for proper response by public agencies by:								X			
		X	SEP-8.1 Encouraging and providing a forum for local jurisdictions to develop mutual aid agreements for essential government services during any incident recovery, particularly for those issues that are multi-county.								X			
		X	SEP-9 SCAG shall help to enhance the capabilities of local and regional organizations, including first responders, through provision and sharing of information by:								X		X	
		X	SEP-9.1 Working with local agencies to collect regional GeoData in a common format, and provide access to the GeoData for emergency planning, training and response.	X	X	X	X	X	X	X	X	X	X	
		X	SEP-9.2 Establishing a forum for cooperation and coordination of these plans and programs among the regional partners including first responders and operations agencies.								X			
		X	SEP-9.3 Developing and establishing a regional information sharing strategy, linking SCAG and its member jurisdictions for ongoing sharing and provision of information pertaining to the region's transportation system and other critical infrastructure.	X	X	X	X	X	X	X	X	X	X	X
		X	SEP-10 SCAG shall provide the means for collaboration in planning, communication, and information-sharing before, during, or after a regional emergency by:								X		X	

IGR/Best Practices	Legislation	Coordination	Constrained Policies	Potential for Direct/Indirect Benefits									Other Benefits	
				Land Use	Transportation	Air Quality	Water	Energy	Open Space	Economy	Security	Solid Waste	Public Health	Climate Change
X			SEP-10.1 Developing and incorporating strategies and actions pertaining to response and prevention of security incidents and events as part of the ongoing regional planning activities.								X			
		X	SEP-10.2 Offering a regional repository of GIS data for use by local agencies in emergency planning, and response, in a standardized format.	X	X	X	X	X	X	X	X	X	X	
		X	SEP-10.3 Entering into mutual aid agreements with other MPOs to provide data sharing in the event that SCAG is no longer able to function due to an incident.								X			

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[1] National Cooperative Highway Research Program Report 525 Volume 9 "Guidelines for Transportation Emergency Training Exercises" McCormick Taylor Inc. 2006

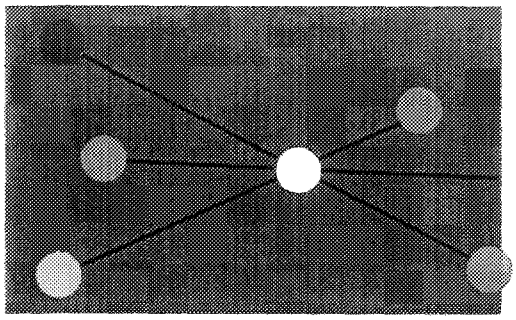
[2] Michael D. Meyer, Ph.D, P.E., Georgia Institute of Technology: The Role of the Metropolitan Planning Organization (MPO) in Preparing for Security Incidents and Transportation System Response.

[3] Federal Emergency Management Agency: Community Emergency Response Team (IG-317) Student's Guide

[4] California Government Code Section 8589.5

[5] Tsunami Hazard Assessment For The Ports Of Long Beach And Los Angeles, (Moffatt and Nichol) 1997. http://www.portoflosangeles.org/DOC/REPORT_Tsunami_%20April_2007.pdf

REGIONAL



Comprehensive Plan

- Open Space & Habitat
- Land Use
- Air Quality
- Water
- Energy
- Solid Waste
- Security & Emergency Preparedness
- Economy
- Transportation

Helping Communities Achieve A Sustainable Future

RECOMMENDATION

- **Approve for release the Draft RCP**
  - Transportation
  - Security & Emergency Preparedness

REGIONAL Comprehensive Plan

Helping Communities Achieve A Sustainable Future

RCP TASK FORCE

- Met October 17
- Recommendations
  - Maintain coordinated schedule
  - Draft RCP is living document
  - Ready for public discussion and debate
  - Extended public review concurrent with RTP

RCP REVIEW

- Aug 13 RCP Task Force reviewed Transportation and Security & Emergency Preparedness
- Aug 30 TCC reviewed Transportation and Security & Emergency Preparedness recommendations
- Oct 17 RCP Task Force recommends authorize release of Draft RCP

TRANSPORTATION

- Builds off pending 2008 RTP
- Strategic initiatives needed, pending completion of strategic portion of 2008 RTP
- Calls for market-based incentives
- Improved coordination with land use planning

SECURITY & EMERGENCY PREPAREDNESS

- Coordinate investments in transportation security
- Support investment in Intelligent Transportation Systems
- Ensure rapid repair of transportation system after an emergency
- Service as an information center on emergency preparedness and response